

Reduce Risk of Unplanned Material Handling Equipment Downtime due to Power Disturbances and Abnormalities



Challenge

Unreliable power can wreak havoc on your conveyor systems and material handling control systems. The equipment and overall conveyor integration can become disabled during power quality events. This can cause unplanned downtime which can reduce the overall equipment effectiveness (OEE) and facility productivity.

Facility backup generators are some of the most common and straight forward ways to reduce the risk of unplanned power outages however these generators are expensive and costly to maintain. They tend to have a long switchover time which usually can't maintain critical power to the advanced technology on the packaging or distribution floor during short duration outages. The Institute of Electrical and Electronics Engineers (IEEE) has shown that short duration outages and power quality issues are some of the most common internal problems to resolve. ① A warehouse automation survey from Peerless Research Group (PRG) shows that reliability and uptime continue to be the top concern of facility owners. ②

Our Solution

Utilize Emerson Power Quality Solutions on your conveyor and material handling equipment to ensure that clean power is provided reliably to the most critical equipment. Emerson provides industrial DIN Rail Uninterruptible Power Supplies (UPS) which are available in DC Input or AC Input configurations. These UPS products are the ideal back-up solution for your critical connected loads.

- SDU DC – B Series Uninterruptible Power Supply – Provides ride through during brief power outages and allows for safe equipment shutdown to prevent data loss, work interruptions and equipment damage during longer outages. The SDU DC B Series has an input range of 22.1 Vdc to 28.6 Vdc.
- SDU AC – B Series Uninterruptible Power Supply – Provides maximum machine availability while minimizing unplanned disruptions. The SDU AC B Series accepts an input of 120 Vac or 230 Vac depending on the model selected.

The Value of Emerson’s Comprehensive Solutions

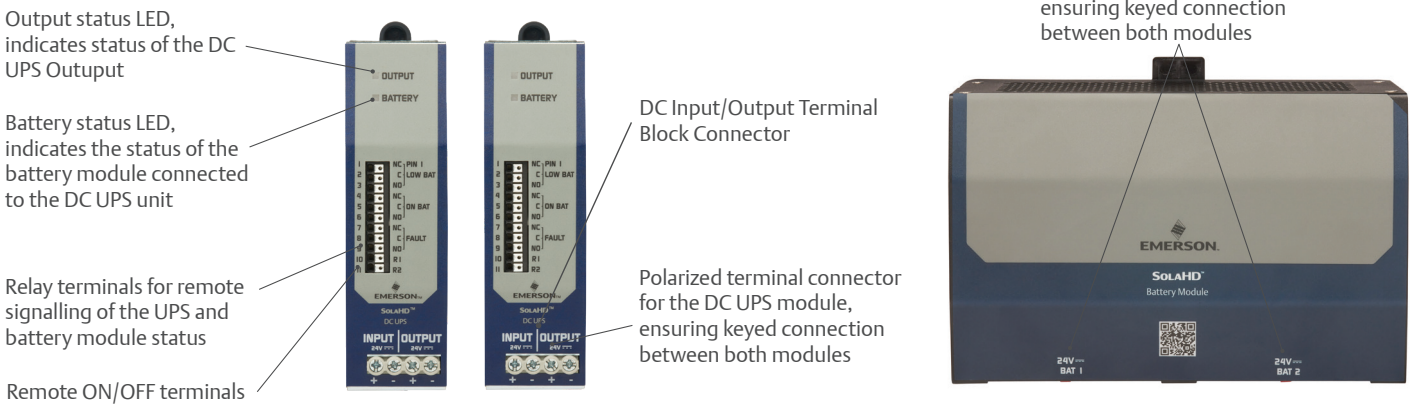
Emerson can help you improve the OEE and productivity of your facility by reducing unplanned downtime stemming from poor power quality. Emerson’s power quality products, including the SDU AC and DC B Series Uninterruptible Power Supplies, can provide reliable backup power to protect the most critical equipment from voltage surges, sags, brownouts, or even blackouts.

Smaller Footprint: Boasting smaller, lighter-weight footprint, the flexibility of the SDU AC/DC B Series provides optimal performance without taking up valuable space in the control cabinet.

Reliable Battery: Wide operation temperature range (0-50 °C) equates to an extended design lifetime, providing increased protection in high heat environments.

Communications: Connect your critical backup power devices to your facility networks to monitor their performance and be notified of any abnormal conditions. The communication card is available in several different industrial protocols including Ethernet I/P, Modbus TCP, ProfiNet, or EtherCAT. A dry contact relay card is also available for discrete communication.

The SolaHD Difference



Sources:

1. IEEE Standards Association. (2015, March 26). IEEE Standards Association. <https://standards.ieee.org>
2. Michel, R. Automation Survey: Budgets healthy, though labor availability issues grow. Automation Survey: Budgets Healthy, Though Labor Availability Issues Grow - Modern Materials Handling. (2022, February 3) https://www.mmh.com/article/automation_survey_budgets_healthy_though_labor_availability_issues_grow

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